OIPE IAP45
JAN 20 2006
PATENT & TRADEMARK OFFICE

FIG. 1

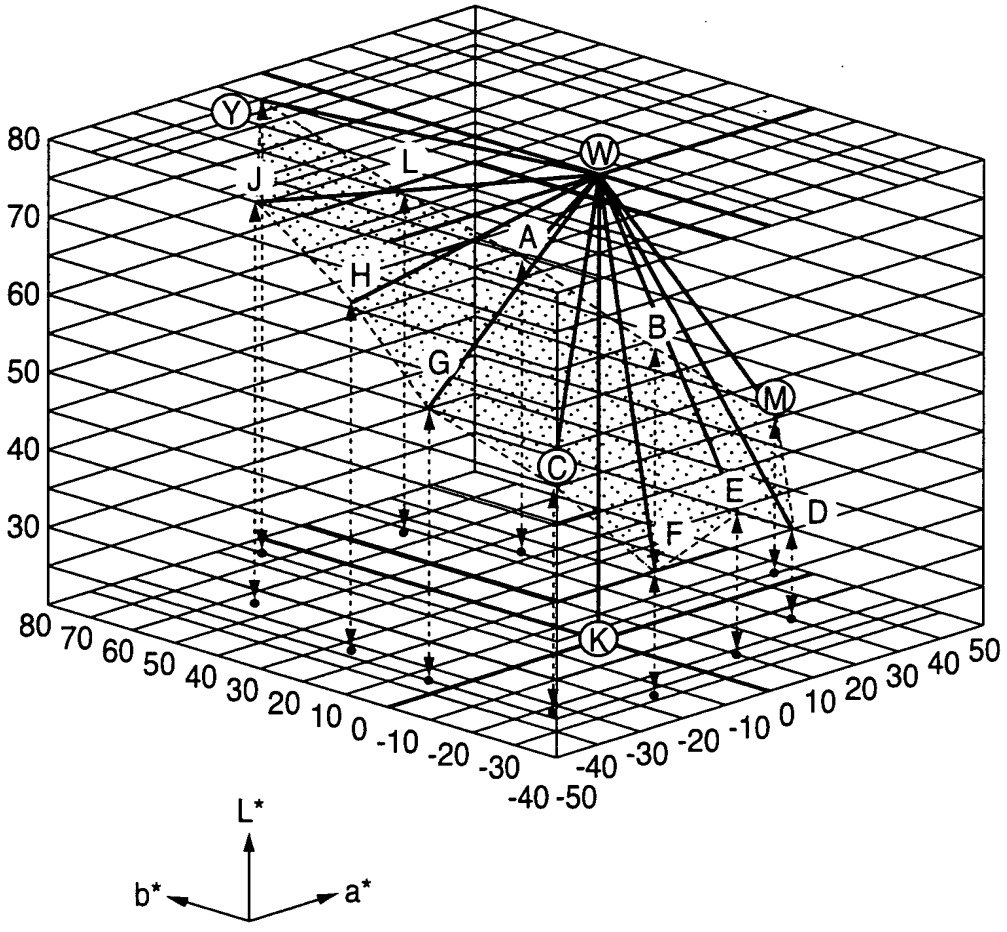


FIG. 2

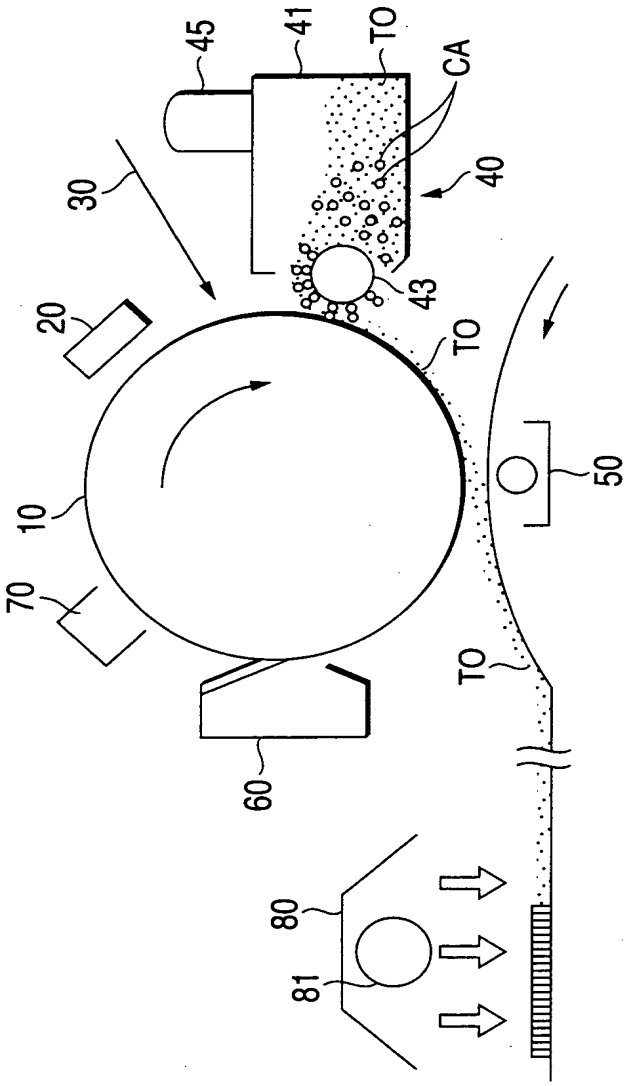


FIG. 3A

		Y_1	M_1	C_1
RESIN		75	81	88
COLORANT		8	7	5
CHARGE CONTROL AGENT		2	2	2
ELECTRICALLY CONDUCTIVE FINE PARTICLES		15	10	5
AMOUNT OF ELECTRIC CHARGE		17.1	17.2	17.1
ELECTRICAL RESISTIVITY		12	8	15
COLOR CHARACTERISTIC	L*	78	38	48
	a*	-13	43	-32
	b*	74	4	-21
	c*	74.7	43.6	38.5

FIG. 3B

		W_1	W_2	W_3	W_4
RESIN		82	83	84	85
COLORANT		10	7	5	3
CHARGE CONTROL AGENT		2	2	2	2
ELECTRICALLY CONDUCTIVE FINE PARTICLES		6	8	9	10
AMOUNT OF ELECTRIC CHARGE		17.2	17.1	17.2	17.1
ELECTRICAL RESISTIVITY		9	10	12	15
COLOR CHARACTERISTIC	L*	85	85	86	85
	a*	-1	-1	-2	-3
	b*	1	2	2	4
	c*	1.4	2.2	2.8	5.0

FIG. 3C

		G_1	G_2	G_3	G_4	K_1
RESIN		89	89	88.5	87.8	88
COLORANT		2	1	0.5	0.2	10
CHARGE CONTROL AGENT		2	2	2	2	2
ELECTRICALLY CONDUCTIVE FINE PARTICLES		7	8	9	10	0
AMOUNT OF ELECTRIC CHARGE		16.9	17	17	17.1	17.2
ELECTRICAL RESISTIVITY		10	11	12	15	10
COLOR CHARACTERISTIC	L*	20	21	25	35	18
	a*	1	1	1	1	1
	b*	0	1	1	2	0
	c*	1.0	1.4	1.4	2.2	1.0

FIG. 4A

		Y_5	M_5	C_5
RESIN		91	92	93
COLORANT		7	6	5
CHARGE CONTROL AGENT		2	2	2
ELECTRICALLY CONDUCTIVE FINE PARTICLES		0	0	0
AMOUNT OF ELECTRIC CHARGE		17.5	17.4	17.3
ELECTRICAL RESISTIVITY		150	100	60
COLOR CHARACTERISTIC	L*	79	39	47
	a*	-10	43	-33
	b*	75	4	-20
	c*	75.7	43.6	38.6

FIG. 4B

		W_5	G_5
RESIN		88	96
COLORANT		10	2
CHARGE CONTROL AGENT		2	2
ELECTRICALLY CONDUCTIVE FINE PARTICLES		0	0
AMOUNT OF ELECTRIC CHARGE		17.3	17.4
ELECTRICAL RESISTIVITY		45	60
COLOR CHARACTERISTIC	L*	86	20
	a*	-1	1
	b*	1	1
	c*	1.4	1.4

FIG. 5

	CHROMATIC COLOR			WHITE TONER				GREY TONER				BLACK	CHROMATIC COLOR			ACHROMATIC COLOR	
	Y_1	M_1	C_1	W_1	W_2	W_3	W_4	G_1	G_2	G_3	G_4	K_1	Y_5	M_5	C_5	W_5	G_5
EXAMPLE 1	25	25		50													
EXAMPLE 2	35	35		30													
EXAMPLE 3	45	45		10													
EXAMPLE 4	15	15		70													
EXAMPLE 5	5	5		90													
EXAMPLE 6	25	25			50												
EXAMPLE 7	25	25				50											
EXAMPLE 8	25	25					50										
EXAMPLE 9	20		30	50													
EXAMPLE 10			80	20													
EXAMPLE 11		40	30	30													
REFERENCE EXAMPLE 1	25	25										50					
REFERENCE EXAMPLE 2	35	35										30					
REFERENCE EXAMPLE 3	45	45										10					
REFERENCE EXAMPLE 4	15	15										70					
REFERENCE EXAMPLE 5	5	5										90					
REFERENCE EXAMPLE 6	25	25						50									
REFERENCE EXAMPLE 7	35	35						30									
REFERENCE EXAMPLE 8	45	45						10									
REFERENCE EXAMPLE 9	15	15						70									
REFERENCE EXAMPLE 10	5	5						90									
REFERENCE EXAMPLE 11	25	25							50								
REFERENCE EXAMPLE 12	25	25								50							
REFERENCE EXAMPLE 13	25	25									50						
REFERENCE EXAMPLE 14	20		30					50									
REFERENCE EXAMPLE 15	60		30					10									
COMPARATIVE EXAMPLE 1													25	25		50	
COMPARATIVE EXAMPLE 2													25	25			50
COMPARATIVE EXAMPLE 3												50	25	25			

FIG. 6

	CHROMATIC COLOR	ACHROMATIC COLOR	R_H/R_L	BEFORE CONTINUOUS PRINTING			AFTER CONTINUOUS PRINTING			COLOR DIFFERENCE
				L*	a*	b*	L*	a*	b*	ΔE
EXAMPLE 1	50	50	1.5	68	14	25	71	15	26	3.3
EXAMPLE 2	70	30	1.5	64	18	33	66	17	35	3.0
EXAMPLE 3	90	10	1.5	60	22	40	62	22	42	2.8
EXAMPLE 4	30	70	1.5	73	9	17	72	9	20	3.2
EXAMPLE 5	10	90	1.5	80	4	9	78	4	11	2.8
EXAMPLE 6	50	50	1.25	67	15	25	68	15	25	1.0
EXAMPLE 7	50	50	1.5	67	15	26	67	14	27	1.4
EXAMPLE 8	50	50	1.88	68	15	25	65	15	29	5.0
EXAMPLE 9	50	50	1.67	66	-15	0	66	-13	-2	2.8
EXAMPLE 10	80	20	1.67	55	-25	-18	53	-25	-19	2.4
EXAMPLE 11	70	30	1.88	58	10	-5	56	6	-7	4.9
REFERENCE EXAMPLE 1	50	50	1.5	36	16	25	39	17	27	3.7
REFERENCE EXAMPLE 2	70	30	1.5	43	19	33	45	20	35	3.0
REFERENCE EXAMPLE 3	90	10	1.5	50	22	41	52	22	42	2.2
REFERENCE EXAMPLE 4	30	70	1.5	26	10	17	28	11	19	3.0
REFERENCE EXAMPLE 5	10	90	1.5	22	5	8	23	5	10	2.2
REFERENCE EXAMPLE 6	50	50	1.5	42	15	25	43	14	27	2.4
REFERENCE EXAMPLE 7	70	30	1.5	48	19	34	50	19	35	2.2
REFERENCE EXAMPLE 8	90	10	1.5	53	22	40	55	22	41	2.2
REFERENCE EXAMPLE 9	30	70	1.5	33	10	18	35	10	19	2.2
REFERENCE EXAMPLE 10	10	90	1.5	25	5	9	26	5	10	1.4
REFERENCE EXAMPLE 11	50	50	1.5	44	16	26	46	15	29	3.7
REFERENCE EXAMPLE 12	50	50	1.5	46	15	26	45	15	29	3.2
REFERENCE EXAMPLE 13	50	50	1.88	48	14	25	44	13	27	4.6
REFERENCE EXAMPLE 14	50	50	1.50	33	-13	1	35	-13	1	2.0
REFERENCE EXAMPLE 15	90	10	1.50	50	-15	40	52	-14	37	3.7
COMPARATIVE EXAMPLE 1	50	50	3.33	72	13	23	61	15	29	12.7
COMPARATIVE EXAMPLE 2	50	50	2.5	38	14	23	45	12	28	8.8
COMPARATIVE EXAMPLE 3	50	50	15	30	13	22	49	14	35	23.0

REPLACEMENT SHEET
Application No. 10/680,253

FIG. 7

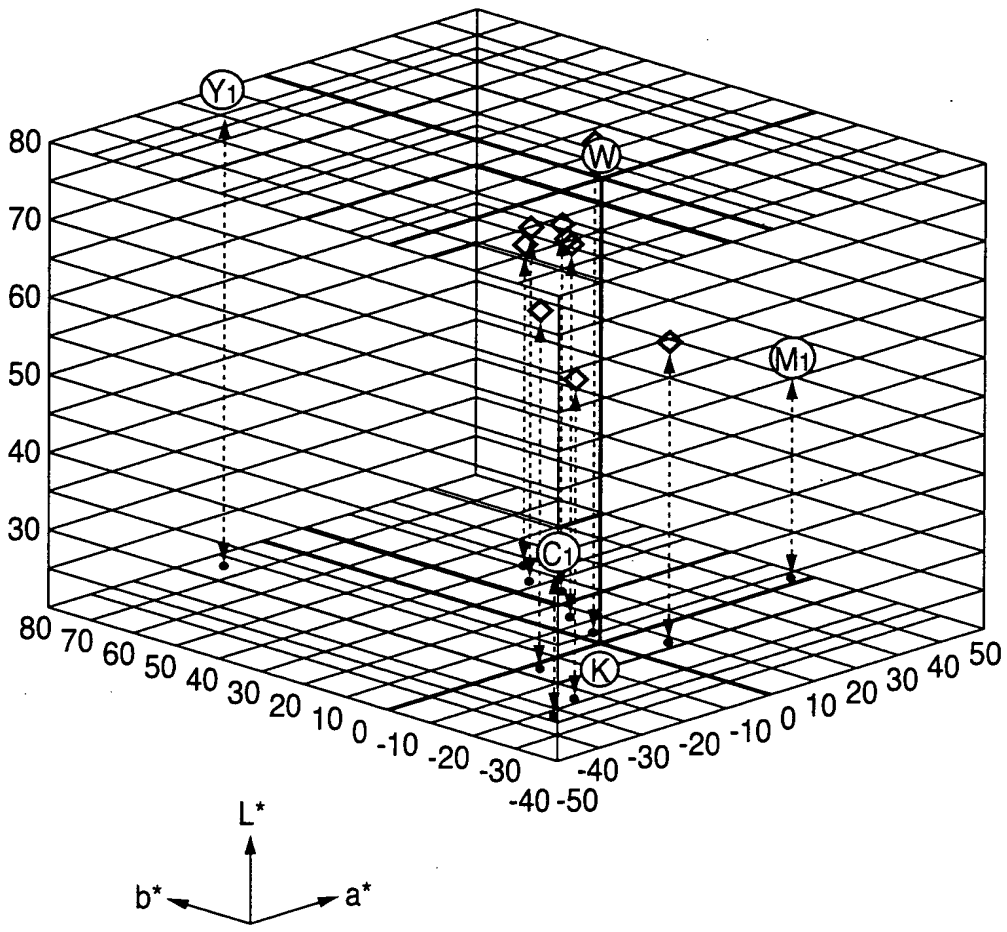

Y1
W
M1
C1
K
80
70
60
50
40
30
80 70 60 50 40 30 20 10 0 -10 -20 -30 -40 -50
-40 -30 -20 -10 0 10 20 30 40 50
L*
b*
a*

FIG. 8

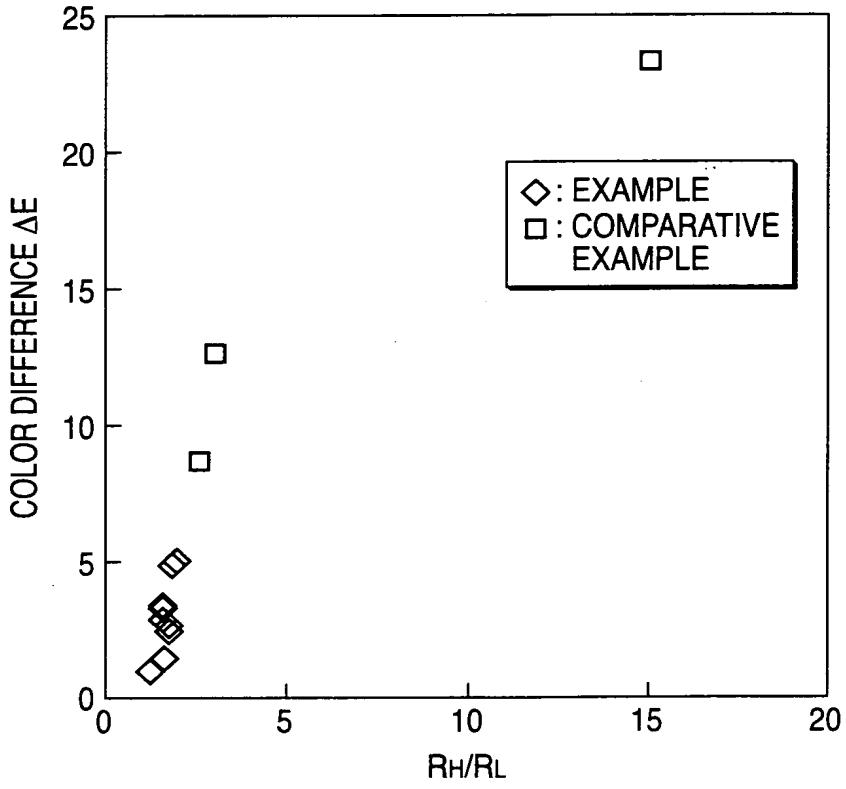
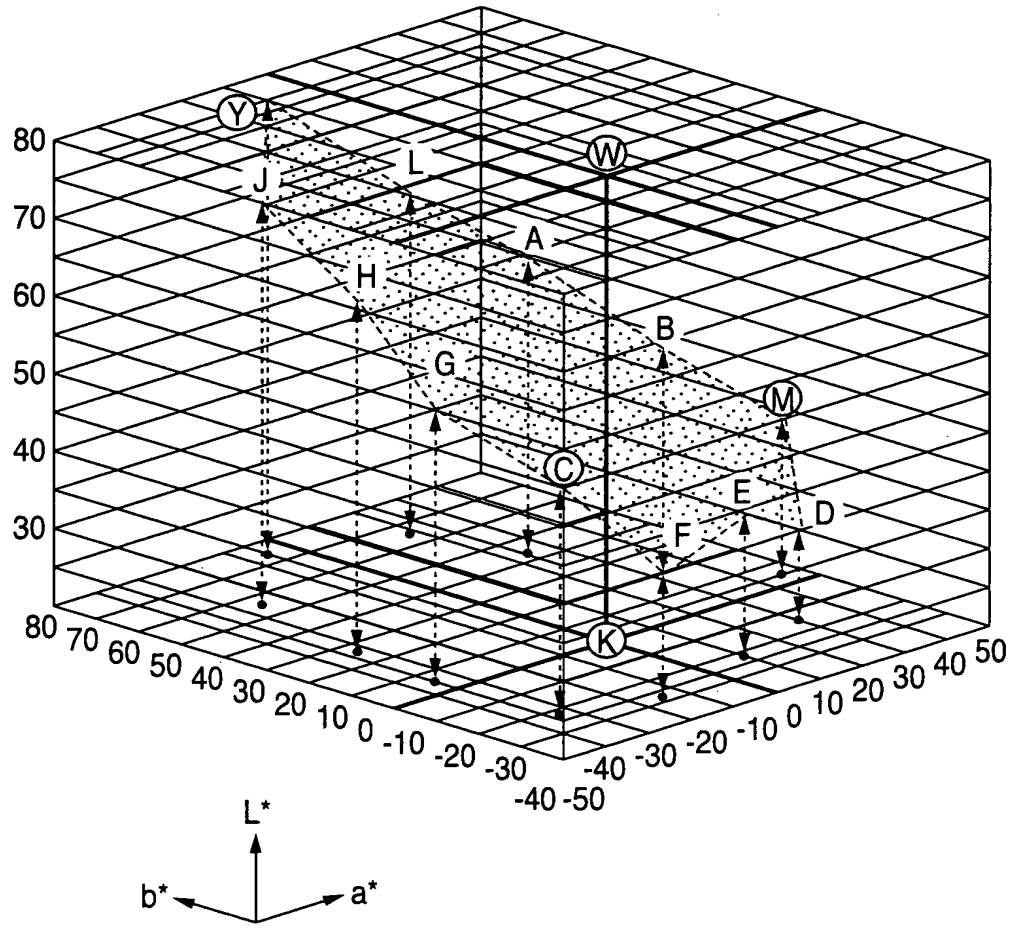

25
20
15
10
5
0
0
5
10
15
20
COLOR DIFFERENCE ΔE
RH/RL
◇: EXAMPLE
□: COMPARATIVE EXAMPLE

FIG. 9


Y
W
L
J
A
H
B
G
M
C
E
D
F
K
80
70
60
50
40
30
80 70 60 50 40 30 20 10 0 -10 -20 -30 -40 -50
-40 -30 -20 -10 0 10 20 30 40 50
L*
b*
a*